

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. *(Currently Amended)* A trapping area creating method comprising:

dividing an image represented in form of a combination of polygons to which colors are applied into a plurality of image areas by at least one a straight line passing through vertexes of the polygons, wherein an image area is designated by said at least one straight line and the boundaries of a polygon divided by said at least one straight line;

determining if trapping should be applied to each pair of image areas adjacent to one another in at least one direction of two predetermined directions, ~~with respect to the plurality of image areas wherein the image is divided;~~ and

creating a band-shaped trapping area extending along a boundary of two image areas comprising a pair of image areas determined as being suitable for trapping.

2. *(Previously Presented)* A trapping area creating method according to claim 1, wherein said dividing the image uses straight lines extending in same directions as said two predetermined directions passing through the vertexes of the polygon, and sides of the polygon.

3. (*Previously Presented*) A trapping area creating method according to claim 1, wherein said determination uses, as said two predetermined directions, an upper and lower direction and a right and left direction of the image.

4. (*Previously Presented*) A trapping area creating method according to claim 1, wherein said determination is based on a difference between colors of two image areas constituting said pair of image areas.

5. (*Previously Presented*) A trapping area creating method according to claim 1, wherein creation of said trapping area creates, as said trapping area, an area interposed between a line constituting said boundary and a line obtained when said line (first occurring) is subjected to a parallel translation.

6. (*Currently Amended*) A trapping area creating apparatus for creating a trapping area in accordance with a trapping area creating method, said method comprising:

dividing an image represented in form of a combination of polygons to which colors are applied into a plurality of image areas by at least one a-straight line passing through vertexes of the polygons, wherein an image area is designated by said at least one straight line and the boundaries of a polygon divided by said at least one straight line;

determining if trapping should be applied to each pair of image areas adjacent to one another in at least one direction of two predetermined directions, ~~with respect to the plurality of image areas wherein the image is divided~~; and

creating a band-shaped trapping area extending along a boundary of two image areas comprising a pair of image areas determined as being suitable for trapping.

7. (*Currently Amended*) A trapping area creating program storage medium storing a trapping area creating program, which causes a computer to execute a trapping area creating method, said method comprising:

dividing an image represented in form of a combination of polygons to which colors are applied into a plurality of image areas by at least one a-straight line passing through vertexes of the polygons, wherein an image area is designated by said at least one straight line and the boundaries of a polygon divided by said at least one straight line;

determining if trapping should be applied to each pair of image areas adjacent to one another in at least one direction of two predetermined directions, ~~with respect to the plurality of image areas wherein the image is divided~~; and

creating a band-shaped trapping area extending along a boundary of two image areas comprising a pair of image areas determined as being suitable for trapping,

when said trapping area creating program is incorporated into said computer.

AMENDMENT UNDER 37 C.F.R. § 1.116
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REMARKS

Applicant requests that the Patent Office acknowledge Applicant's claim to foreign priority, and to indicate that the certified copy of the priority document, Japanese Patent Application No. 2001-009024 dated January 17, 2001, has been made of record in the file.

Claims 1, 6 and 7 are amended to recite the formation of the image areas. Support for the amendments to claims 1, 6 and 7 can be found, for example, in Figure 17 of the instant application. The amendments to claims 1, 6 and 7 do not add any new matter, and do not raise any new issues requiring further search and/or consideration by the Patent Office. Entry and consideration of the amendments to claims 1, 6 and 7 is respectfully requested.

Claims 1-7 are all the claims presently pending in the application.

1. Claims 1-7 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Dermer (U.S. Patent No. 5,668,931) in view of Kubo *et al.* (U.S. Patent Publication No. 2001/0019340). Applicant traverses the rejection of claim 1-7 for at least the reasons discussed below.

The initial burden of establishing that a claimed invention is *prima facie* obvious rests on the USPTO. *In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984). To make its *prima facie* case of obviousness, the USPTO must satisfy three requirements:

- a). The prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the artisan to modify a reference or to combine references. *In re Fine*, 837

F.2d 1071, 1074 (Fed. Cir. 1988).

- b). The proposed modification of the prior art must have had a reasonable expectation of success, and that determined from the vantage point of the artisan at the time the invention was made. *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1209 (Fed. Cir. 1991).
- c). The prior art reference or combination of references must teach or suggest all the limitations of the claims. *In re Vaeck*, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991); *In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970).

The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, the nature of a problem to be solved. *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). Alternatively, the motivation may be implicit from the prior art as a whole, rather than expressly stated. *Id.* Regardless if the USPTO relies on an express or an implicit showing of motivation, the USPTO is obligated to provide particular findings related to its conclusion, and those findings must be clear and particular. *Id.* A broad conclusionary statement, standing alone without support, is not “evidence.” *Id.*; *see also, In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001).

In addition, a rejection cannot be predicated on the mere identification of individual components of claimed limitations. *In re Kotzab*, 217 F.3d 1365, 1371 (Fed. Cir. 2000). Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed. *Id.*

The Patent Office acknowledges that Dermer is not specific to the dividing of an image into a plurality of image areas. See June 14, 2004 Final Office Action, pg. 5. The Patent Office alleges that Kubo *et al.* supplies the necessary disclosure to overcome the acknowledged deficiencies of Dermer.

The combination of Dermer and Kubo *et al.* fails to teach or suggest the dividing of an image (composed of polygons) into a plurality of image areas by passing at least one straight line through the polygons such that the image areas are formed by the straight line and the boundaries of a divided polygon, as recited in claim 1. As noted in the Rule 111 Amendment filed on April 5, 2004 and as acknowledged by the Patent Office, Dermer does not teach or suggest dividing an image comprised of polygons into a plurality of image areas.¹ For example, Figure 7a (cited by the Patent Office) illustrates lines A, B, C, D, E, F, G and H passing through the vertices of the polygons “abcd” and “efgh”. However, nowhere in Dermer is there any teaching or suggestion that the polygons “abcd” and “efgh” are divided into smaller areas based on the lines A, B, C, D, E, F, G and H. For example, Dermer does not define an image area comprising the polygon boundaries “ab” and “ad” and the line B.

The combination of Dermer with Kubo *et al.* fails to teach or suggest the image area designation as recited in claim 1. The portion of Kubo *et al.* cited by the Patent Office describes the division of a surface of a printing object being divided into a plurality of target areas for

¹ Dermer discloses rearranging the boundaries of the shapes comprising the image. Division of the image into a plurality of image areas is not performed. For example, color regions 210 and 220 are simply remapped into the color regions 210 and 220 shown in Figure 14a or 14b of Dermer.

printing. While Applicant admits that Kubo *et al.* discloses the division of a three-dimensional printing surface into discrete target areas, the combination of Dermer and Kubo *et al.* still fails to teach or suggest that an image composed of polygons is decomposed into a plurality of smaller image areas, wherein the image areas are designated by the straight lines passing through the vertices of the polygons and the boundaries of the divided polygons. As discussed previously, Dermer lacks any teaching or suggestion of the division of an image into discrete image areas based on straight lines intersecting vertices and polygon boundaries, and Kubo *et al.* fails to teach or suggest at least this feature of claim 1 as well. For example, Figure 25 of Kubo *et al.* (references by paragraphs 225-256, which were cited by the Patent Office) discloses a raster-type print scan process, but there is no teaching or suggestion in Figure 25 (or any other Figure of Kubo *et al.*) of the polygon division feature of the invention recited in claim 1. Thus, Applicant submits that the Patent Office cannot fulfill the “all limitations” prong of a *prima facie* case of obviousness, as required by *In re Vaeck*.

Applicant further submits that one of skill in the art would not be motivated to combine the two references. *In re Dembiczak* and *In re Zurko* require the Patent Office to provide particularized facts on the record as to why one of skill would be motivated to combine the two references. Without a motivation to combine, a rejection based on a *prima facie* case of obviousness is improper. *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998)). The level of skill in the art cannot be relied upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308 (Fed. Cir. 1999). The Patent Office must make specific factual findings with respect to the motivation to combine references. *In re Lee*, 277 F.3d 1338, 1342-

44 (Fed. Cir. 2002). Although the Patent Office provides a motivation analysis with respect to dividing an image to improve printing precision, both Dermer and Kubo *et al.* lack any teaching or suggestion about the desirability of dividing of an image (composed of polygons) into a plurality of image areas by passing at least one straight line through the polygons such that the image areas are formed by the straight line and the boundaries of a divided polygon. Thus, Applicant submits that the Patent Office cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicant submits that the combination of Dermer and Kubo *et al.* fails to teach or suggest all of the claimed elements as arranged in claim 1. Therefore, the combination of Dermer and Kubo *et al.* clearly cannot render the present invention obvious as recited in claim 1. Thus, Applicant submits that claim 1 is allowable, and further submits that claims 2-5 are allowable as well, at least by virtue of their dependency from claim 1. Applicant respectfully requests that the Patent Office withdraw the § 103(a) rejection of claims 1-5.

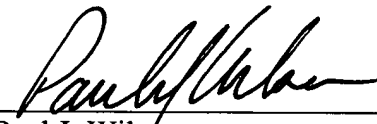
With respect to claims 6 and 7, Applicant submits that claims 6 and 7 are allowable for at least the same reasons discussed above with respect to claim 1, in that the combination of Dermer and Kubo *et al.* fails to teach or suggest dividing of an image (composed of polygons) into a plurality of image areas by passing at least one straight line through the polygons such that the image areas are formed by the straight line and the boundaries of a divided polygon. Thus, Applicant submits that claims 6 and 7 are allowable, and respectfully requests that the Patent Office withdraw the § 103(a) rejection of claims 6 and 7.

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In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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